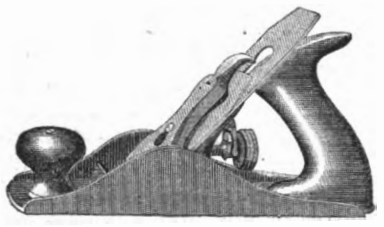
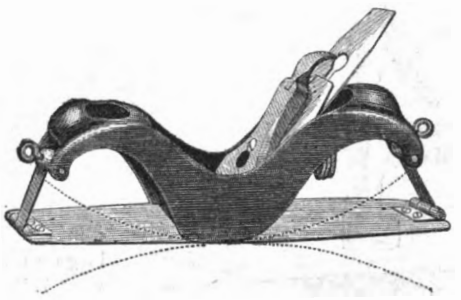
Bailey's Patent Adjustable Planes.

THE current maxim, that "necessity is the mother of invention," seems to have suffered a sad perversion in the minds of a large class of men in these latter days. In almost every community there can be found

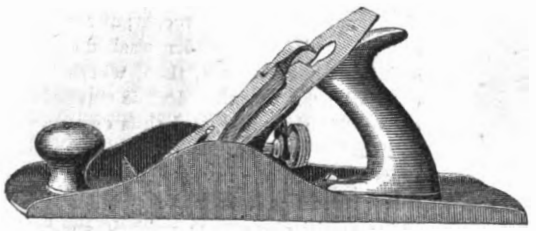


men who through lack of application of their own minds and hands to some regular kind of labor, are thereby reduced to a state of necessity; and from this condition of necessity, usually due to their own general shiftlessness, they set themselves about inventing something for other and more practical people than themselves, to make use of in the every-day pursuits of life.

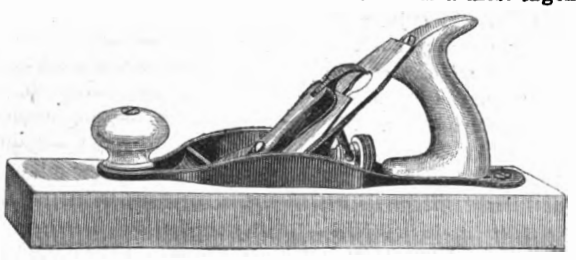


Now, as a rule, the useful inventions of any age have not been made by "day dreamers," but by men of active brains and hands, and while in the exercise of these in some legitimate branch of industry. The inventions are thus really the outgrowth of their necessities while attending to their own business, and not children of that sort of necessity which is brought on by not minding one's own, but attending to every other person's business.

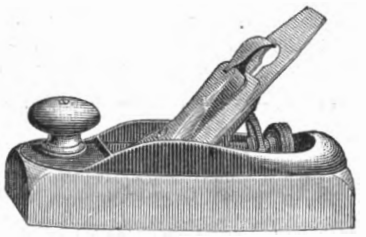
We refer in these columns to "Bailey's Patent Ad-



justable Planes," which are indeed the ripened fruit of a thoroughly inventive brain, but quickened into action by the hard necessity felt by the inventor for a better tool than he could obtain, for the prosecution of his early avocation, that of a piano-forte case maker. From crude experiments at the first, Mr. Bailey has succeeded in presenting to the wood-workers of the country a plane, adjustable in all its parts without the use of a hammer or any other tool, and at a cost consistent with every good mechanic's means.

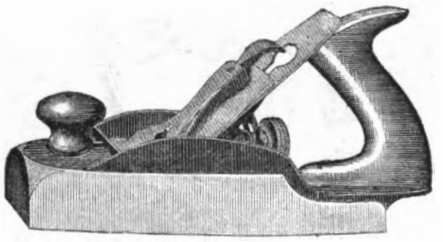


On this page will be found illustrations of a few of the "Bailey Patent Adjustable Planes," as now manufactured. The plane-iron is fastened down to its bed by means of a lever and a cam operated by a thumb latch, instead of being wedged in, like the common bench plane; and when thus fastened down can be readily set forward or withdrawn, as the nature of the work requires, or the judgment of the owner dictates. This is done by using the thumb-screw which is located under the bed-piece and just in front of the right hand of the workman when the plane is in use. There is no guess-work necessary, as in setting forward or back the plane-iron by the old method of a blow from a hammer. The most delicate adjustment of the plane-iron can be made without taking the hands from the plane, or the plane from the work. Also, if desirable, the mouth of the plane can be opened, or made more close, by the aid of screws which fasten the bed-piece to the stock of the plane. As we have already stated, Mr. Bailey experimented at the first with reference to his own requirements, and the result was an adjustable plane made entirely of iron. An important advantage of the iron plane for all



workmen engaged in shops for the manufacture of musical instruments, cabinet-ware, carriages, cars, etc., arises from the fact that so many shops are now heated by steam, or such method as introduces the heat underneath the benches, and the iron planes are subject to no change from the variations in temperature. Being once correct, they will always remain so. The application of the adjustable features embraced in Mr. Bailey's invention has also been successfully made to planes with a wooden stock, so that the assortment is now full in both iron and wood, embracing smooth, fore, jack, jointer, and block planes, and adapted to the wants of every class of wood-working mechanics.

The engraving near the centre of this page represents a plane with an elastic face, to plane circular work, both concave and convex. The plane-iron in this plane is also adjustable. Circulars containing



full description of the Bailey Planes will be furnished on application to the Stanley Rule and Level Company, manufacturers, at New-Britain, Ct.

Miller's Patent Combined Plow, Matching Plane, and Filletster.

THIS tool is a most ingenious combination of the ordinary carpenter's plow, with a matching plane and a filletster; and the whole occupies less space in the tool-chest than a common plow.

The engraving (Fig. 1) represents the stock of the tool, adjusted for use as a plow. With each plow eight bits are fur-

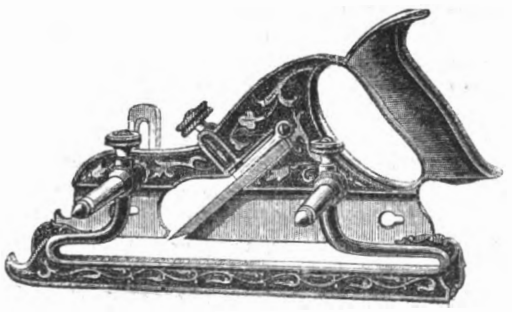


Fig. 1.

nished, also a tonguing tool, (shown in Fig. 2,) and by use of this, together with the ¼-inch plow-bit for grooving, a perfect matching plane is made.

A metallic bed-piece, (Fig. 3,) with 1¼-inch cutter in it, can be attached to the stock of the tool, by means of two screws passing through the slots in the base-piece of the stock. Over this bed-piece the gauge, or

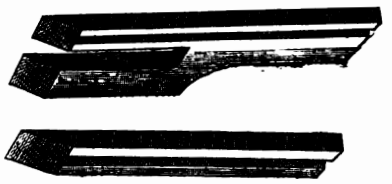


Fig. 2.

gate, will move backward or forward, and when secured to the bars by the thumb-screw, will constitute an adjustable filletster of any width required by the owner. The upright gauge on the back of the stock, is adjusted by a thumb-screw, likewise, and regulates

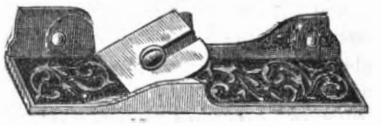


Fig. 3.

the depth for the use of the filletster, as for all the other tools embraced in the combination. These tools are manufactured with iron and with gun metal stocks.

Wheeler's Patent Countersink.

A GREATLY improved countersink for wood-workers, is that invented by Mr. George B. Wheeler, and manufactured under his letters-patent. The construction of the tool is well shown in the engraving given in this column. The bit of the countersink is in the shape of a hollow eccentric cone, thus securing a cutting edge of uniform draft from the point to the base of the tool, and obviating the tendency of such a tool to lead off into the wood at its cutting edge, and to leave an angular line where it ceases to cut. The form of the tool between the cutter and the shank is that of a hollow half cone, inverted, thus leaving ample space just back of and above the cutter for the free escape of shavings. This countersink works equally well for every variety of screw, the pitch of the cone being the same as the taper given to the heads of all sizes of screws, thereby rendering only a single tool necessary. The countersink acts rapidly, and is easily sharpened by drawing a thin file lengthwise inside of the cutter. The ingenious method of attaching a gauge to a countersink will be observed by reference to the engraving. This feature is accounted a great improvement in all branches of wood-working where accuracy is desirable in sinking the heads of screws. By fastening the gauge at a given point, any number of screws may be driven so as to leave the heads flush with the surface, or at a uniform depth below it. The gauge can be easily moved, or detached entirely, by means of the set screw; and the countersinks are sold with or without the gauge. The tools illustrated on this page are supplied to dealers by the Stanley Rule and Level Company, warehouse, No. 55 Chambers street, New-York.